

## CLAIMS

1. A recording medium as a recording disk housed in a cartridge, said recording medium comprising:

a detection hole formed at a predetermined position on a reference plane of said cartridge; and

opening and closing means for opening and closing said detection hole and, when said detection hole is in a closed state, forming a plane substantially horizontal level with the reference plane of said cartridge at the position of said detection hole.

2. The recording medium as claimed in claim 1,

wherein said recording medium has at least a first detection hole and a second detection hole; and

said second detection hole is opened and closed by said opening and closing means, and said first detection hole is in an open state at all times.

3. The recording medium as claimed in claim 2,

wherein an external form of said recording medium is substantially similar to an external cartridge form of another recording medium having at least a first detection hole and a second detection hole at predetermined positions on a reference plane of a cartridge housing a disk, and said recording medium and said other recording medium are in a category of

recording media that can be loaded into an identical apparatus;

the second detection hole of said recording medium indicates that writing is prohibited when the second detection hole of said recording medium is in an open state; and

the first detection hole of said other recording medium indicates that writing is prohibited when the first detection hole of said other recording medium is in an open state, and the second detection hole of said other recording medium indicates reflectivity of the disk.

4. The recording medium as claimed in claim 3,

wherein the second detection hole of said recording medium is opened and closed according to operation of an operating projection disposed at a predetermined position of said cartridge, and operating directions of opening and closing of the second detection hole of said recording medium on a basis of a direction of operation of the operating projection of said recording medium are identical with operating directions of opening and closing of the first detection hole of said other recording medium on a basis of operation of an operating projection of said other recording medium.

5. The recording medium as claimed in claim 4,

wherein a material thickness of said opening and closing means moved according to the operation of said operating projection is greater than a material thickness of a portion under a bottom surface of said first detection hole.

6. A recording and reproducing apparatus for recording and reproducing a recording medium as one type of disk among a plurality of types of disks, said disk being housed in a cartridge of a predetermined form, said recording and reproducing apparatus comprising:

at least one hole detection means for detecting an open state and a closed state of a plurality of detection holes disposed at predetermined positions of said cartridge;

type determining means for irradiating said recording medium loaded in said recording and reproducing apparatus with a light signal, and determining the type of the disk housed in said cartridge loaded in said recording and reproducing apparatus on a basis of reflected light from said disk; and

hole type determining means for determining hole types of the detection holes disposed at the predetermined positions of said cartridge on a basis of a result of determination by said type determining means.

7. The recording and reproducing apparatus as claimed in claim 6,

wherein at least one of said determined hole types indicates prohibition of writing to said disk.

8. The recording and reproducing apparatus as claimed in claim 6,

wherein a first detection hole is defined at a first predetermined position of said cartridge, and a second detection hole is defined at a second predetermined position of said cartridge;

an open state of said second detection hole of a recording medium housing a first type of disk represents a state of writing to the disk being prohibited;

an open state of said first detection hole of a recording medium housing a second type of disk represents a state of writing to the disk being prohibited, and said second detection hole of the recording medium housing the second type of disk represents reflectivity of the disk; and

which of the open states of said detection holes indicating prohibition of disk writing is determined on the basis of the result of determination by said type determining means.

9. The recording and reproducing apparatus as

claimed in claim 6,

wherein on a basis of a signal detected from light reflected from said disk, said type determining means determines the type of the disk by at least one of detection of reflectivity of the disk, detection of a phase difference of said signal, detection of managing information of the recording medium, detection of an address structure of the recording medium, and detection of a specific area of the recording medium.

10. The recording and reproducing apparatus as claimed in claim 9,

wherein said type determining means determines the type of the disk on a basis of detection results of said detection of the reflectivity, said detection of the phase difference, said detection of the managing information, and said detection of the structure.

11. The recording and reproducing apparatus as claimed in claim 9,

wherein said type determining means determines the type of the disk on a basis of detection results of said detection of the reflectivity, said detection of the managing information, and said detection of the structure.

12. The recording and reproducing apparatus as claimed in claim 9,

wherein said type determining means determines the type of the disk on a basis of detection results of said detection of the managing information and said detection of the specific area and a result of detection by said hole detection means.

13. A recording and reproducing method for recording and reproducing a recording medium as one type of disk among a plurality of types of disks, said disk being housed in a cartridge of a predetermined form, said recording and reproducing method comprising:

a hole detection step for detecting an open state and a closed state of a plurality of detection holes disposed at predetermined positions of said cartridge;

a type determining step for irradiating said recording medium loaded in said recording and reproducing apparatus with a light signal, and determining the type of the disk housed in said cartridge loaded in said recording and reproducing apparatus on a basis of reflected light from said disk; and

a hole type determining step for determining hole types of the detection holes disposed at the predetermined positions of said cartridge on a basis of a result of determination of the type of said disk.

14. The recording and reproducing method as

claimed in claim 13,

wherein said determined hole types indicate whether or not writing to said disk is possible.

15. The recording and reproducing method as claimed in claim 14,

wherein a disposition of a first detection hole at a first predetermined position of said cartridge is defined, and a disposition of a second detection hole at a second predetermined position of said cartridge is defined;

an open state of said first detection hole of a first type of disk represents prohibition of writing to the disk; and

an open state of said second detection hole of a second type of disk represents prohibition of writing to the disk, and said first detection hole of the second type of disk represents reflectivity of said disk.